

**30 NOVEMBER 1993**



**AIR FORCE MATERIEL COMMAND  
Supplement 1**

**23 FEBRUARY 1995**

**Safety**

**NONNUCLEAR MUNITIONS SAFETY BOARD**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**NOTICE:** This publication is available digitally on the SAF/AAD WWW site at: <http://afpubs.hq.af.mil>. If you lack access, contact your Publishing Distribution Office (PDO).

---

OPR: HQ AFSA/SEWV (Major David C.  
Venus)  
Supersedes AFR 127-16, 24 May 1990

Certified by: HQ USAF/SE  
(Brig Gen James L. Cole Jr.)  
Pages: 5  
Distribution: F

---

This instruction prescribes the Air Force Nonnuclear Munitions Safety Board (NNMSB) and implements AFR 91-2. It states membership and mission, outlines procedures, and assigns responsibilities.

---

(AFMC) This supplement applies to all AFMC organizations and Air Force associate units without full-time safety staffs located on AFMC installations. It does not apply to the Air National Guard or US Air Force Reserve units and members.

**SUMMARY OF REVISIONS**

This issuance aligns the instruction with AFR 91-2. It incorporates the requirements and procedures formerly published in AFR 127-16. It updates command designations, designates the Director, Weapons & Space Safety (HQ AFSA/SEW) as the NNMSB chairperson, eliminates the position of vice chairperson, and clarifies that a THAR does not always require a written document.

(AFMC) This is the initial supplement to AFI 91-205. It incorporates the new publications formats and tailors the requirements of AFI 91-205 to AFMC operations.

**AFI 91-205, 30 November 1993, is supplemented as follows:**

**1. Members and Advisory Personnel:**

**1.1. Members.** The NNMSB membership consists of one voting representative from the Air Force Operational Test and Evaluation Center (AFOTEC), the Air National Guard Bureau, the Air Force Reserve, and all major commands (MAJCOM) except Air Force Intelligence Command. Chiefs or directors of safety for these organizations or commands appoint their representatives. NNMSB mem-

bers must be experts on Air Force nonnuclear munitions and must know the policies, procedures, operational limitations, and constraints unique to their commands.

1.1.1. The NNMSB Chairperson must be an active duty colonel or higher (normally the Director, Weapons & Space Safety, Air Force Safety Agency) designated by the Commander of the Air Force Safety Agency. The Chairperson presides at NNMSB meetings.

1.1.2. The AFMC, ACC, AFOTEC, AMC, PACAF, and USAFE representatives are an NNMSB quorum. Under unusual situations, quorum members may delegate their vote to another quorum member (proxy), if the proxy member and the Chairperson agree. When the NNMSB reviews a nonnuclear munition whose operational use is limited to one or more specific commands, include these commands in the quorum requirements.

**1.2. Advisory Personnel.** Invite advisors to attend only if you need their participation to conduct NNMSB business effectively. Advisors do not vote. Postpone review of an item until a later meeting if you don't have enough advisory expertise to evaluate it properly.

**1.2.1. (Added-AFMC)** Ogden Air Logistics Center (OO-ALC/LIWS) furnishes a system safety qualified individual as an advisor to attend all Nonnuclear Munitions Safety Board (NNMSB) meetings.

**1.2.2. (Added-AFMC)** Other ALCs and Product Centers should furnish technical advisors when items that are, or will be, managed/developed by their centers are presented or discussed at NNMSB meetings. AFDTC/SES will include these technical advisors on message distribution.

**1.2.3. (Added-AFMC)** The OO-ALC/LIWS advisor need not attend special NNMSB meetings unless specifically requested by AFMC/SEW.

**2. Mission.** The NNMSB is the review authority for all nonnuclear munitions. The NNMSB's mission includes providing design and qualification safety guidance to program management authorities. The NNMSB must review nonnuclear munitions developed by the Air Force but not intended for Air Force use, (for example, foreign military sales). For nonnuclear munitions intended for Air Force operational use the NNMSB:

2.1. Reviews and establishes design safety and qualification test criteria, standards, and requirements.

2.2. Guides program management authorities throughout the life cycle to ensure the safety certification criteria are receiving enough consideration.

2.3. Oversees the safety of new or modified nonnuclear munitions, including those developed by the Air Force or obtained from other US military services or foreign sources. Safety certification or approval by another service or government does not replace NNMSB review and approval.

2.4. Conducts a safety study and review program for all nonnuclear munitions which it oversees. Certifying a munition or equipment item under the Air Force Nuclear Safety Certification Program (AFI 91-103) also certifies the item for nonnuclear use if the nonnuclear part of the system was evaluated. The NNMSB does not review nuclear-certified munitions and equipment items unless requested by a member. Loss of nuclear certification does not cause loss of nonnuclear certification.

2.5. Reviews the safety of explosives operations, when requested by an NNMSB member or HQ USAF agency, and recommends actions to improve safety or occupational health provisions of the operation.

**2.6. Exclusions.** The NNMSB does not evaluate:

- Explosive components of aircraft egress and life support systems.
- Remotely piloted vehicles (for example: target, decoy, or surveillance drones).
- Nuclear and space systems.
- Locally manufactured equipment that receives MAJCOM-level safety approval.
- General-purpose equipment such as ground transport vehicles, passenger vehicles, and commercial forklifts.
- Aircraft munition interface equipment if the aircraft's design authority controls its (mechanical and electrical) configuration.

**2.6. (AFMC)** Contact AFMC/SEW to obtain data submission requirements for MAJCOM approval of locally manufactured equipment (LME).

**3. General NNMSB Instructions.** To support its mission, the NNMSB must use an operating procedures document that meets the requirements of this instruction as the framework for its formal proceedings. Members must comply with the procedures document and review the document annually.

**4. HQ USAF Agencies.** Normally, HQ USAF/SE forwards NNMSB Meeting Minutes and Technical Munitions Safety Studies (TMSS) to SAF/AQPW, SAF/MIQ, HQ USAF/LGMW, and HQ USAF/XOFW for review and concurrence. Concurrence with NNMSB findings and recommendations is formal HQ USAF approval or certification. HQ USAF/SE documents the headquarters' position in a letter to the NNMSB Executive Secretary.

**5. HQ USAF/SE:**

- 5.1. Is the focal point for all NNMSB matters within HQ USAF.
- 5.2. Resolves disagreements within HQ USAF on any NNMSB findings or recommendations and obtains a final position on NNMSB proceedings.
- 5.3. Forwards TMSSs and Munitions Safety Analyses (MSA) pertaining to chemical agents and chemical weapons systems to the Deputy Assistant Secretary of the Air Force Environment, Safety, and Occupational Health (SAF/MIQ) for review and distribution to the Assistant to the Secretary of Defense (Atomic Energy) and to the Assistant Secretary of Defense (Force Management and Personnel).
- 5.4. Consults with the NNMSB and provides a representative at each NNMSB meeting. Advises the NNMSB as to HQ USAF policy on issues that arise during formal proceedings.
- 5.5. Obtains necessary HQ USAF coordination on NNMSB reports or resolve differences. HQ USAF offices have 30 calendar or workdays from the date of distribution by HQ USAF/SE to comment on the NNMSB report.
- 5.6. Notifies the Executive Secretary of the results of HQ USAF's review of meeting minutes and TMSSs.

**6. HQ AFSA/SEW:**

- 6.1. Approves or disapproves requests to deviate from mandatory design requirements.

6.2. Does what the operating procedures assigns to them.

6.3. Reports unfavorable mishap trends identified for munitions previously certified by the NNMSB that could require reevaluation by the NNMSB.

## **7. AFMC:**

7.1. Designates an NNMSB member.

**7.1. (AFMC)** AFMC/SE designates a primary and alternate NNMSB member.

7.2. Designates an engineering support function responsible to conduct NNMSB studies and analyses.

**7.2. (AFMC)** AFDTC/SES will be the engineering support function responsible to conduct NNMSB studies and analyses.

**7.2.1. (Added-AFMC)** AFDTC/SES will set up the necessary operating procedures to ensure the timely acquisition of supporting information and the completion of Technical Munitions Safety Studies (TMSS), Munitions Safety Analyses (MSA) and Test Hazard Assessment Reviews (THAR) for presentation to the NNMSB. A copy of these procedures will be provided to AFMC/SEW.

**7.2.1.1. (Added-AFMC)** The TMSS is a comprehensive safety study of a nonnuclear munition used to document safety engineering evaluations and to submit findings for NNMSB review. The TMSS must contain sufficient information to fully support the certification recommendations formulated by the NNMSB.

**7.2.1.2. (Added-AFMC)** The MSA is less comprehensive than the TMSS and is typically prepared for modified munitions and munitions support equipment that have minor impact on safety. Like the TMSS, the MSA must fully support NNMSB recommendations.

**7.2.1.3. (Added-AFMC)** The THAR is an assessment that contains a physical and functional description of the item along with sufficient analysis to ensure the item is safe for use within a controlled test environment. The THAR is applicable to live airborne testing of bombs, warheads, cluster bomb units, projectiles, rocket motors, flares, bursting charges and similar items containing live energetic material. It also includes initiating devices such as fuzes, rocket motor arm/fire devices, flare safety and ignition devices, and devices having an influence on initiation such as retarders, launchers and suspension racks.

**7.2.2. (Added-AFMC)** AFDTC/SES will be the center of expertise in providing guidance and direction to non-AFMC organizations, when requested, concerning preparation of studies/reviews for presentation to the Board.

**7.2.3. (Added-AFMC)** Each ALC/Product Center weapon safety office will act as the point of contact for NNMSB activities for their center. OO-ALC/LIWS will act as the POC for OO-ALC in lieu of OO-ALC/SEW.

**7.2.3.1. (Added-AFMC)** The Center SEW offices and OO-ALC/LIWS will provide support to AFDTC/SES for Board activities as outlined in the procedures referenced in paragraph 7.2.1.

**7.2.3.2. (Added-AFMC)** Each ALC will ensure a system is set up for the review of information concerning a product improvement or modification, Engineering Change proposal (ECP), Organic Change Proposal (OCP), and Value Engineering Change Proposal (VECP) on ALC-assigned nonnuclear munitions, associated munitions packaging, and support equipment or systems. For those modifications with a form, fit or function impact and/or safety involvement, contact AFDTC/SES regarding guidance concerning NNMSB requirements.

7.3. Designates an Executive Secretary of the NNMSB.

## **8. The Executive Secretary:**

**8. (AFMC)** AFDTC/SE designates an Executive Secretary for the NNMSB.

8.1. Is the principal administrative assistant to the chairperson and members for conducting NNMSB affairs.

8.2. Consults with US Air Force procuring organizations, program offices, managers, or other agencies as necessary, to clarify the requirements of this instruction and the NNMSB operating procedures.

8.3. Informs the chairperson about NNMSB activities and issues that might affect NNMSB proceedings.

8.4. Maintains the official record copy of the NNMSB's operating procedures and ensures the procedures are available at each NNMSB meeting. Annually or when requested by the membership, offers the procedures document for NNMSB review

8.5. Maintains a list of appointed NNMSB members and alternates.

8.6. Provides the administrative services necessary to conduct NNMSB meetings and to do what the Executive Secretary requires after each meeting.

8.7. If HQ USAF disapproves an NNMSB recommendation on certification or noncertification of any given nonnuclear munition, notifies the appropriate program management authorities of its change in certification status.

**8.8. (Added-AFMC)** The Executive Secretary will ensure that inert hardware is used during briefings to the NNMSB whenever possible and that visual aids such as vu-graphs, projectors, etc, will be utilized to give descriptive and detailed data.

## **9. AFSOC, AETC, AMC, NGB, AFRES, AFOTEC, AFSPACECOM, ACC, PACAF, and USAFE**

must carry out responsibilities identified in the operating procedures. Additionally, each command designates an NNMSB member and an alternate. The member must have the authority necessary to ensure a comprehensive command review of NNMSB safety studies and analyses. Designated members should serve at least 3 years and should be a field grade officer, equivalent-grade civilian, or a senior noncommissioned officer.

## **10. (Added-AFMC) General Information:**

**10.1. (Added-AFMC)** AFMC organizations will not contract for or introduce into the USAF inventory, new, modified, or redesigned munitions or support and test equipment until they have been recommended for certification by the NNMSB and approved by Air Staff.

**10.2. (Added-AFMC)** Local purchase of commercial nonnuclear munitions is prohibited unless they are stock listed or approved for local purchase by HQ AFMC or OO-ALC as appropriate. OO-ALC/LIWS will grant approval for local purchase of small arms ammunition, but requests for local purchase of other munitions must be forwarded through OO-ALC/LIWS to AFMC/SEW for approval. OO-ALC/LIWS will develop local procedures for handling emergency requirements.

**10.3. (Added-AFMC)** Flight tests of modified live munitions items or uncertified initiating devices/systems will not be conducted until the NNMSB has approved a THAR. Surveillance tests of inventory items do not require a THAR. Contact AFDTC/SES for information regarding the content and format for submitting a THAR.

**10.4. (Added-AFMC)** AFDTC/SES will make the determination as to whether a TMSS or MSA is required when a munitions item is modified or when a safety study is requested by a Board member.

JAMES L. COLE JR., Brig Gen, USAF  
Chief of Safety

**Attachment 1**

**GLOSSARY OF ACRONYMS**

***Abbreviations and Acronyms***

**ACC**—Air Combat Command

**AETC**—Air Education and Training Command

**AF/LGMW**—Air Force Deputy Chief of Staff Logistics, Munitions & Missiles Plans & Policy Division

**AFMC**—Air Force Material Command

**AFOTEC**—Air Force Operational Test and Evaluation Center

**AFRES**—Air Force Reserve

**AFSPACECOM**—Air Force Space Command

**AF/XOFW**—Air Force Directorate of Forces, Weapons Divisions

**AMC**—Air Mobility Command

**HQ USAF**—Headquarters, United States Air Force. All organizations within the Air Staff and the Secretariat

**MSA**—Munitions Safety Analysis

**NGB**—National Guard Bureau

**NNMSB**—Nonnuclear Munitions Safety Board

**PACAF**—Pacific Air Forces

**SAF/AQPW**—Secretariat of the Air Force, Directorate (Tactical Programs), Weapons Division

**SAF/MIQ**—Deputy Assistant Secretary of the Air Force Environment, Safety, and Occupational Health

**TMSS**—Technical Munitions Safety Study

**USAFE**—United States Air Forces in Europe

**ATTACHMENT 2 (ADDED-AFMC)****NONNUCLEAR MUNITIONS CATEGORIES**

**A2.1. (Added-AFMC)** The following nonnuclear munitions systems, subsystems, components, and related equipment items are within the purview of the NNMSB as it carries out its mission.

**A2.1.1. (Added-AFMC)** Conventional explosive devices including all types of warheads, projectiles, bombs, mines, and grenades, and their training configurations. Nuclear weapon training shapes containing conventional explosives are included in this latter category.

**A2.1.2. (Added-AFMC)** Conventional missiles and thrust-augmented munitions intended for air-to-air, air-to-ground, air-to-space, ground-to-ground, ground-to-air, ground-to-space operations.

**A2.1.3. (Added-AFMC)** Aircraft suspension and release systems (for example, racks, launchers, rails), dispensers, packaging devices used to contain or disperse conventional explosive devices, or devices used as the direct launching platform for a complete nonnuclear munition system.

**A2.1.4. (Added-AFMC)** Components used to safe, arm, and/or fire conventional explosive devices or propulsion devices, all fuzes and explosive or pyrotechnic transfer elements, and all components of a munition used to detect a target and issue signals to initiate a warhead, bomb, etc.

**A2.1.5. (Added-AFMC)** Components integral to a nonnuclear munitions system used to direct the munition from the launching platform to a target, including aerodynamic control surfaces, thrust vectoring devices, retardation devices, associated control logic, seekers and stored energy sources.

**A2.1.6. (Added-AFMC)** Igniters and initiators used in igniting or directing the initiation of conventional explosive and pyrotechnic devices, fuzes, propulsion devices, stored energy sources, or dispersal and suspension devices.

**A2.1.7. (Added-AFMC)** Aircraft guns and associated control, safing, and firing mechanisms, personal small arms weapons, and all gun-fired ammunition.

**A2.1.8. (Added-AFMC)** Rocket motors and engines that produce thrust by the release of energy and are used to propel any nonnuclear munition or component thereof.

**A2.1.9. (Added-AFMC)** Flares and markers, pyrotechnics, photoflash devices, explosive dispensers or decoy devices, explosive simulators, demolition charges, explosive flight termination systems for missile and target drones, explosive ordnance disposal (EOD) equipment using explosives or controlling the initiation of explosives, chemical agents and associated dispensers, training and scoring items containing explosives or pyrotechnics, targets that contain hazardous components, and other munition-related explosive devices.

**A2.1.10. (Added-AFMC)** Handling, storage, test, maintenance, and transport equipment for use with, or in support of, nonnuclear munitions, including certain locally manufactured equipment as defined in AFI 91-205, paragraph 2.6.